Previous references.
G.R. 152 of 06-07 Sl 1-17 Files

1909-10
(Genl)

Gen. File No. 280 – 09

Serial Nos. 1 – 18

Later references.
G.R. 174 of 10/11 Sl 1-4
– 157 of 11/12 – 1-5 Files 11.
– 343 – 13/14 – 1-4
– 523 – 15 Sl 1-3
– 605-16 Sl 1-3
– 42-18 Sl 1-3

GENERAL AND REVENUE SECRETARIAT.

Serial Nos. 1 – 18

Part B. for September 1910

SUBJECT.

Invention for "Improvements in filters for metallurgical and other uses".

---

1. From Messrs. De Penning De Penning & Co Patent Agents, Calcutta
Letter dated 7.5.10.
Forwards an application from the Butters-Vacuum Filter Company, Incorporated manufacturers a Corporation of the State of Nevada U.S.A. for leave to file a specification of an invention for "Improvements in filters for metallurgical and other uses."

2. To the officer in charge of State Stationery
No. J. 6247 dated 23.5.10.
Remits Rs 10/- requisition with Sl. 1.

G. R. S. 58

No. G. 6248. dated 23.5.10.

Forwards for report on the Specification in question

4. From the Officer in charge of S. H. Dry

No. G. 518 dated 25.5.10.

Acknowledges receipt of Rs 10 sent with Sl. 2

5. From the State Geologist.

No. 2472 dated 13.6.10.

In reply to Sl. 3. states that the invention is useful & that the claims are legitimate & recommends the acceptance of the Specification.

6. To Messrs. de Penning & de Penning

Patent Agents,

19, Watkin's Lane

Howrah.

In reply to Sl. 1, requires whether applicants to file a Specification of the invention in question said to have been found in the Gwalior State and of the kind to which grants of this sort usually refer.

7. From Messrs de Penning & de Penning

No. 192 dated 5.8.10.

Forwards a copy of the orders of the Govt of India on their application in respect to the invention

8. To the Anglo Patent Vacuum Ice Co, No. G. 996 dated 16.8.10.

Authorises them to file a specification of the invention referred to in Sl. 1.

9. To Messrs. de Penning & de Penning.

No. G. 997 dated 16.8.10.

Forwards the above Sl. 8. for communication to the applicants.

G.R.S. 11]

Inventions Act 1907 22 of 1907

1907-10.

GENERAL AND REVENUE SECRETARIAT

(Genl-Rev)

NOTES.

Genl. File. No. 280/07-10

FILE HEADING.

Invention for "Improvements in Filters for metallurgical and other uses".

From

Messrs Dennys Dennys, Dalton & Co Calcutta

No. Letter - Dated 7. 5. 10 Received 12. 5. 10

Diary No. 4577	Encls.	Spare Copies.	Serial No. 1

BRIEF ABSTRACT OF LETTER.

Forwards an application from the Butters Vacuum Filter Company, Incorporated, manufacturers, a corporation of the State of Nevada U.S.A. for leave to file a specification of an invention for "Improvements in Filters for metallurgical and other uses".

NOTES AND ORDERS.

The inventor in this case is Mr. Clarence G. Patterson of California who has assigned the right to the Butters Patents Vacuum Filter Company Another Agent, Mr. Philip Middleton Justice who was authorised to apply for

NOTES — First sheet.

GPB—30,000—20-3-06.

5456

Serial No.	
	the Letters Patent in this case, has also assigned his right of the exclusive in the United Kingdom privilege in Mysore. &c. two deeds of assignment are received from the above Company (though the 2nd one was not necessary at all)
	2. With the above a power of attorney on a stamp paper and a fee of Rs 10 have also been received. The fee will be remitted to the Treasury and the Specification sent for expert opinion to the State Geologist. Submitted with 2 drgs
	(Cf bus 12/5/10) 3. Issue Rep 18/5/10
2.	To. The Officer in Ch. of State Engrs Dry. No & 6247 d 23-5-10 Remit Rs 10 received with Sl 1.
3	To. The State Geologist No & 6248 d 23.5.10 Forwards for report the specification in question
4.	From the Officer in Ch. of State Engrs Dry — No & 5718 d 25/5/10. Acknowledges the receipt

NOTE—Contn. sheet.

GPB—55,000—27-4-09

Serial No.

of Rs 10 sent with Serial 2.
Submitted for perusal.
(CJ 30/5/10)
Seen MM 30/5/10

CV

5. To the State Geologist - No 2472 d 13.6.10
With reference to 3, state that in his opinion the invention is novel & that the claims are precise & legitimate & recommends that the specification may be accepted.

6. The applicants say that the corresponding applications for patents have been made both in the United Kingdom & in British India but it is not known whether leave to file a specification has been granted or not by either of those Govts.

Enquire about this from the applicants.
MM 26/6/10

7. However, the above experts' opinion in the present case is in favour of the application being granted
Submitted for orders
(CJ 23.6.10)
8. Please see marginal remarks
MM 26/6/10
Office may issue an enquiry as desired
PTO
24/6

NOTE—Contn. sheet.

GPB—50,000—27.4.09

Secretariat. | File No. 280 of 1907-10

6478

Serial No.	
	9. Offr as directed on last op (Q 2/7/10) Asst 3.7.10
6	10. Messrs De Penning & De Penning Patent Agents 19 Watkins Lane Howrah. With reference to yr enquiries whether applications to file a specification of the invention in question said to have been made in the Govt of India or of the United Kingdom have been granted &c. Calls for the copy of the order[illegible]
7	From Messrs. De Penning & De Penning. No. 1924 - 5-8-10 - Forwarding a copy of the order of the Govt of India on their application in respect of the invention. The Govt of India have accepted the application & the State Geologist also is of opinion that leave to file the specification may be granted. Draft order granting leave (together with a draft Covering letter to the Patent Agents) is put up.

9.8.10. VS Asst 10/8/10

Has not intimation to be sent to [illegible] also?

[illegible] specification [illegible] file [illegible]

NOTE—Contn. sheet.

GPB—55,000—27.4.09

Serial No.	
8	To the Buttes Patent Vacuum Filter Co, Rs. Q. 996 of 16-8-10 — Authorises them to file a specification of the invention resp^d to in Sl. 1.
9.	To Messrs. DePenning & DePenning, Rs. Q. 997 of 16-8-10 — Fds the above (Sl. 8) for transmission to the applicants.

With reference to the Hon'ble Secretary's query on the previous page it is submitted that it is not usual ~~to send a copy of~~ to communicate the order granting leave to file a specification to the expert on whose opinion such leave is granted.

When the specification is actually filed a copy of it will be sent to the State Geologist.

Sd 17-8-10. VS Seen. Minister. 17/8/10

10.	From Messrs. DePenning & DePenning, Patent Agents — No. 205 dated 27th August 1910 —

Forwards the G.O. granting leave to file the specification (Sl. 8) together with Rs 30/-, and requests that the specification may be filed and a certificate granted therefor.

The application has been made in time and the prescribed fee remitted & 4 copies of the Specification furnished. The usual drafts are submitted for approval.

Sd 1/9/10. VS Approved 2/9/10.

NOTE—Contn. sheet.

GPB—55,000—27-4-09

G. R. S. 12]
General and Revenue Secretariat.

G.R. File No. 280 of 1909-10.

Serial No.	
11.	To the Compiler, Mysore Gazette, No. G.1580 d/8.9.10 — Notifies the filing of the above Specifn.
12.	To Messrs DePenning & DePenning, No. G. 1581 d/ 8.9.10 — Sd. Copy of the above Notifn & returns the Sl 8 with the certificate at foot duly filled in & signed.
13.	To the Offr in ch. of State Hunsur Treg, No. G. 1582 d/ 8.9.10 — Remits Rs 30/ recd vide Sl 10.
14.	To Supt. Govt Museum, Chief Engr & State Geologist, No. G. 1583 d/8.9.10 — Sd a Copy of the Specification resp.d & above requests an acknowledgt.
15	From the Offr in charge of the State Hunsur Treasury. No. 64 dated 8th September 1910. Acknowledges the receipt of the sum of Rs 30 sent with Sl 13.
16	From the Supdt, Govt Museum. No. 82 dated 9th Septr 1910. Acknowledges the receipt of the specifn sent with Sl 14.
17	From the State Geologist in Mysore. No. 593 dated 4th Septr 1910. Acknowledges the receipt of the specifn sent with Sl 14.
18	From the Chief Engineer of Mysore. No. 7924 dated 13th September 1910. Acknowledges the receipt of the copy of the specifn sent with Sl 14.

The file may now be recorded.

Subd. 17.9.10

Yes 19-9-10

Rec'd

NOTE—Contn. sheet.

GPB—55,000—27-1-09

7, Watkins Lane, Howrah

7th May 1910.

Epic 280/09-10 D 4569

To

The Secretary to the Government
of H.H. the Maharaja of Mysore
General & Revenue Depts.

Sir

We have the honour to forward herewith an Application from the Butters Vacuum Filter Company, Incorporated, Manufacturer, a Corporation of the State of Nevada, U.S.A, for leave to file a Specification of an invention for "Improvements in Filters for Metallurgical and Other uses"

We also forward the fee thereon of Rupees ten and shall feel obliged by the "Order" thereon being sent to us in due course.

We have the honour to be
Sir
Your most obedient servants

De Penning De Penning

Patent Agents.

DEPENNING & DEPENNING
PATENT AGENTS
CALCUTTA.

[If the Remitter may write but any communication to the Payee, and he is recommended to add his name and address for the information of the Payee.]

Amount of Order £ 10 4s

Name of Remitter Messrs D. Rennie & D. Rennie

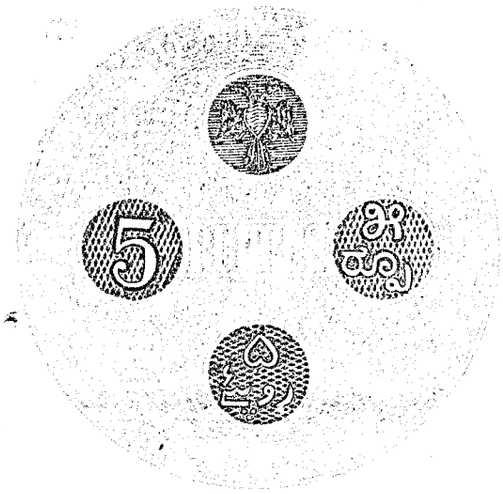
(Please see our letter of date)

RG
12/5/00

to Bt for note

RG
12/5/00

Mysore



POWER OF ATTORNEY.

In the matter of THE BUTTERS PATENT VACUUM FILTER COMPANY, INCORPORATED, Manufacturer, a corporation of the State of Nevada, having offices and doing business at Virginia City, Nevada, United States of America, Assignee.

We, the above-named THE BUTTERS PATENT VACUUM FILTER COMPANY, INCORPORATED, do hereby retain, constitute and appoint Mr L. A. D'Penning of No. 14 Watkins Lane, Howrah, Calcutta, India

as our agent and attorney, to apply for and obtain from the Government of Mysore an Exclusive Privilege or Letters Patent for Improvements in Filters for Metallurgical and Other Uses and to procure extensions of the same from time to time, and we authorize the said Attorney to sign our name to such papers and writings, and do such acts, including substitution or revocation, as may be necessary or expedient; and, lastly, we request that all official communications now, or hereafter, relating to the same may be addressed to him at his office in Calcutta and that he be recognized as our authorized agent in all proceedings incidental thereto.

Dated this third day of December 1909.

The Butters Patent Vacuum Filter Company Incorporated

By Edwin Hatfield Earthwait
Vice President

Signed, Sealed and Delivered at San Francisco California

In the presence of

Herman Hossfeldt, Secretary & Treasurer.

Mysore

ASSIGNMENT BEFORE ISSUE.

WHEREAS I, CLARENCE G PATTERSON, a resident of Berkeley, California, United States of America, Engineer and Inventor, am in possession of an invention for Improvements in Filters for Metallurgical and Other Uses.

NOW, THEREFORE, know ye that for and in consideration of the sum of five shillings to me in hand paid, the receipt of which is hereby acknowledged, I, the said Clarence G Patterson, have assigned and transferred, and by these presents do assign and transfer unto THE BUTTERS PATENT VACUUM FILTER COMPANY INCORPORATED, Manufacturer, a corporation of the State of Nevada, having offices and doing business at Virginia City, Nevada, United States of America, its executors, administrators and assigns, the whole right, title and interest in and to an Exclusive Privilege to be obtained for the said invention from the Government of Mysore, and all and singular the liberties, powers, privileges and advantages whatsoever appertaining or belonging thereunto, the same to be held and enjoyed by the said THE BUTTERS PATENT VACUUM FILTER COMPANY, INCORPORATED, its executors, administrators and assigns to the full end of the term for which such Exclusive Privilege may be granted, or any prolongation or extension thereof as fully and entirely as the same could have been held and enjoyed by me had this assignment not

MYSORE GOVERNMENT MAY 1910 GENERAL STAMP

been made.

IN WITNESS WHEREOF I, the said Clarence G Patterson, have hereunto set my hand and seal this Twentyfirst day of January 1910.

Clarence G. Patterson

Signed, sealed and
delivered at
Johannesburg the Transvaal
~~in~~ the presence ~~of~~
Reginald Caunter
Engineer 23 Lemans Bldg Johannesburg

Alfred J Benson
Engineer 19.20 Lemans Bldgs Johannesburg

Mysore Inventions and Designs Regulation, 1894.
(Page 1.)

Assignment from British Communicatee of Mysore Rights.

WHEREAS, I, Philip Middleton Justice, of 55 and 56 Chancery Lane, London, Fellow of the Chartered Institute of Patent Agents, have filed an Application for Letters Patent in Great Britain on the 7th day of December, 1909, under No. 28625 of 1909, for Improvements in Filters for Metallurgical and other uses, as a communication from Harold Binney, of New York, Lawyer, Attorney for The Butters Patent Vacuum Filter Company, Incorporated, a Corporation of the State of Nevada, having offices at Virginia City, Nevada, and San Francisco, California, United States of America, Manufacturers, AND WHEREAS the said The Butters Patent Vacuum Filter Company, Incorporated, is desirous of obtaining an Exclusive Privilege or Letters Patent in Mysore for the said invention NOW THEREFORE KNOW YE that pursuant to the request and in consideration of the premises I hereby as Trustee assign, transfer and confirm unto the said The Butters Patent Vacuum Filter Company, Incorporated, its successors and assigns hereinafter called the Assignee the whole right, title and interest that I may have in and to such Exclusive Privilege or Letters Patent to be obtained for the said Invention from the Government of Mysore, the same to be held and enjoyed by the said Assignee to the end of the term or period for which such Exclusive Privilege or Letters Patent may be granted.

IN WITNESS WHEREOF, I, the said Philip Middleton Justice, have hereunto set my hand and seal this 2nd day of April, 1910.

Signed, Sealed and Delivered by the said Philip Middleton Justice in the presence of:-

Philip M. Justice

Both of Eden Palace Road Genoa

MYSORE GOVERNMENT MAY 1910 GENERAL STAMP

The Button Patent Vacuum
Filler Company.
1910

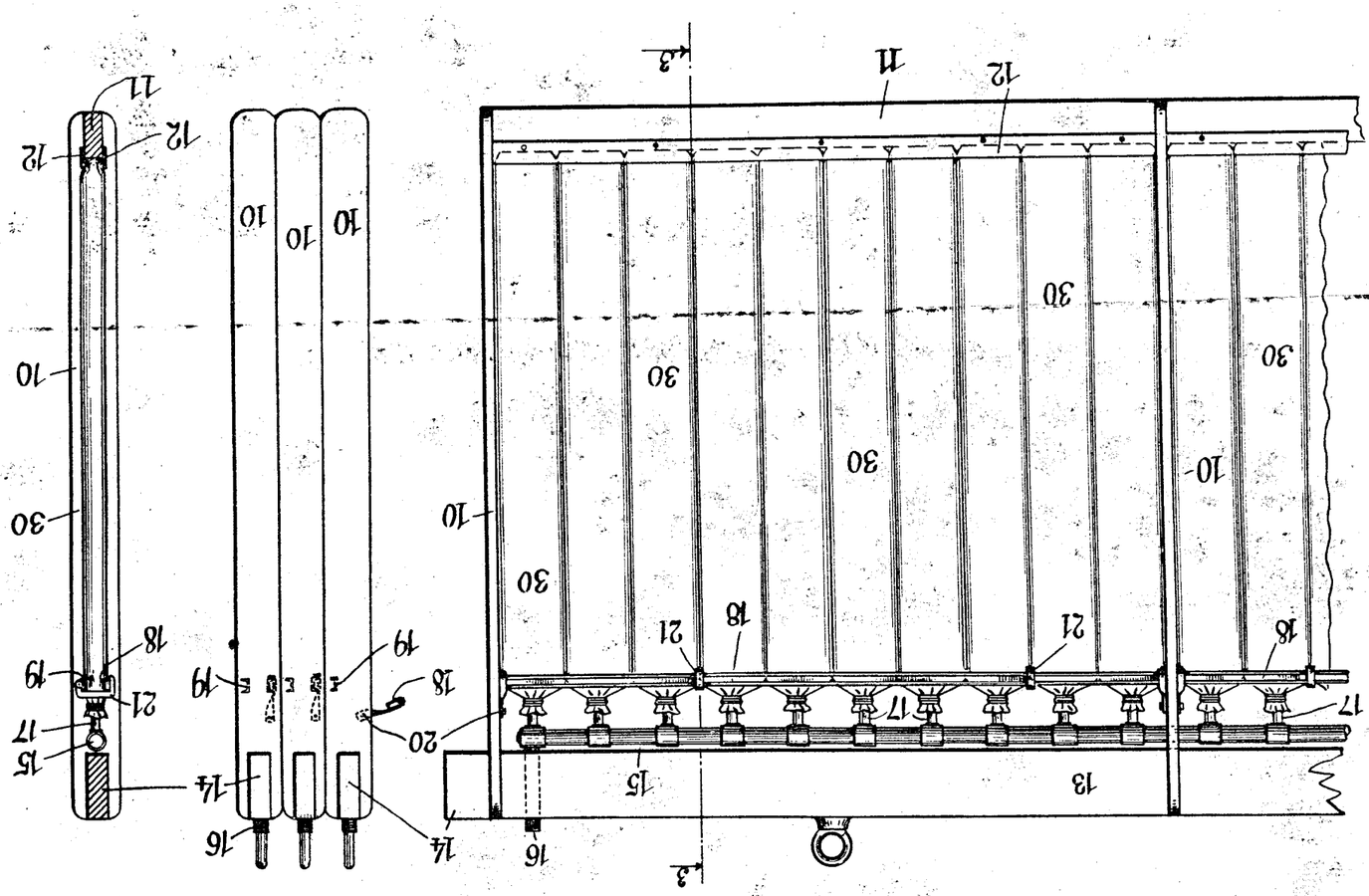


Fig. 1 Fig. 2 Fig. 3

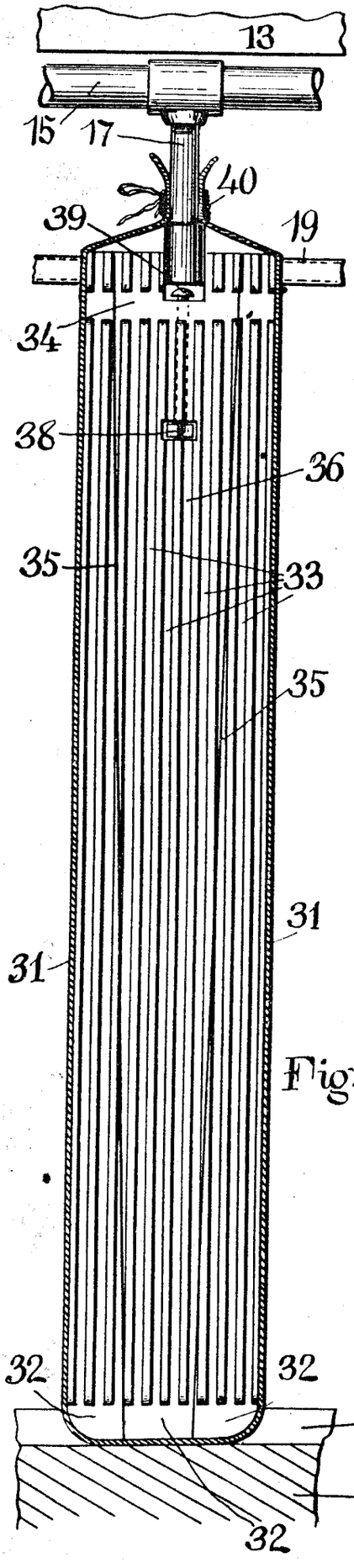


Fig. 4

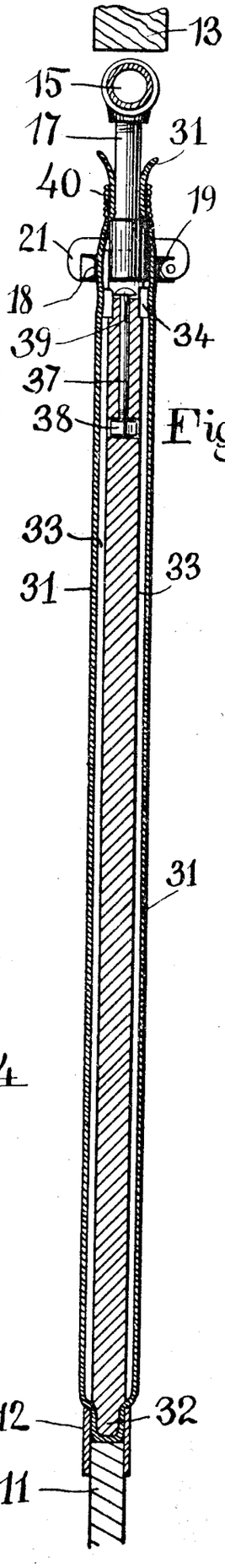


Fig. 5

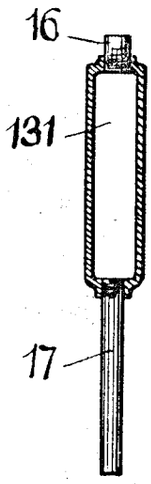


Fig. 6

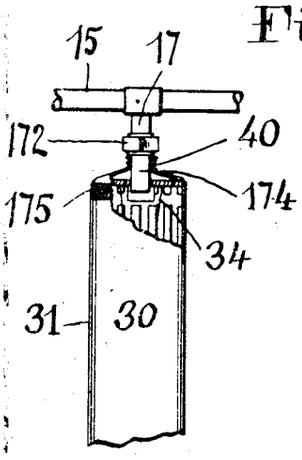


Fig. 8

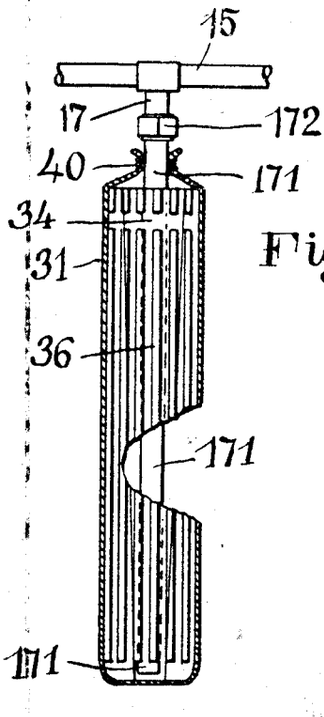


Fig. 7

G.R.S. 29A]

190

From

Secy. to the Govt. of His Highness
the Maharaja of Mysore,
Genl. and Rev. Dept.

To

The Officer in Ch. of

Dated 23. 5. 10 State Progress Dy

Despatched

Received

General No. G6247
Genl No. 180-09-2

Enclosure No. Rs Janaug

Has the honor to remit herewith Rs 10 (ten only) being the fee for the application of the Bottles patent Vacuum Filler Company, in the State of Nevada, U.S.A. for leave to file a Specification in respect of an invention for "Improvements in Fillers

MGCPB--20,000--16-2-05

for metallurgical and
other uses" and to
request an acknowledgment.

By order

WBS

12/8/40

for Maj Gen

bm
18/8

190 .

From

Secy. to the Govt. of His Highness
the Maharaja of Mysore,
Genl. and Rev. Dept.

To

The State Geologist

Dated 23rd March 1910 in Mysore.

Despatched

Received

General No. G 6248
Gen No. 280-09-3

Enclosure No. 1

Has the honor to forward for report under Sec 6(2) of the Mysore Inventions and Designs Regn., a Specification in respect of an invention for "Improvements in Filters for metallurgical and other uses" received from the Patentees Butters & Vacuum Filter Company Incorporated, Manufacturers

a Corporation of the State

of Nevada U.S.A.

Bo,

Bo 1875 10

For Offg Secy

Dec 1875

Gen. Q. 800709-10
84

No. 578 C.V.-4 S D-4766 Q. Pos. 107

Received From The Butters Patent Vacuum Filter Company, Nevada U.S.A, through the Officiating Secretary to the Government of H.H. the Maharaja of Mysore, General and Revenue Department

the sum of Rupees Ten only being the fee for leave to file a Specification in respect of an Invention for "Improvements in Filters for Metallurgical and other uses" and credited thus, Vide, Secretary's No. G 6247/Gen. No. 280-09-2 dated 23-5-1910.

H. H. The Maharaja's State Huzur Treasury,
Bangalore, The 25 May 1910

By Order,

Exd.

Hd. Acctt. Bakshi. Treasurer

Treasury Officer, State Huzur Treasury.

M.G.D. 13]

MYSORE GEOLOGICAL DEPARTMENT,

Dated Bangalore, 15th June 1910.

No. 2472
Encl. 1.

From

DR. W. F. SMEETH, M.A., D.Sc., &c.,
State Geologist in Mysore.

To

C.S. Balasundaram Iyer, Esquire, B.A.,
Offg. Secretary to the Government of His Highness the Maharaja of Mysore, Gen.& Rev.Depts.

SIR,

In reply to your letter No.G.6248/G.M.280-09-3, dated 23rd May 1910, I have the honour to state that I have examined the specification forwarded therewith and am of opinion that the invention is novel and that the claims are precise and legitimate. I am of opinion that the specification may be accepted.

2. The specification is returned herewith.

I have the honour to be,
Sir,
Your most obedient servant,

W. F. Smeeth

C,N.

State Geologist in Mysore.

PETITION OR APPLICATION.

To

THE DEWAN OF MYSORE:

The application of THE BUTTERS PATENT VACUUM FILTER COMPANY, INCORPORATED, Manufacturer, a corporation of the State of Nevada, United States of America, having offices and doing business at Virginia City, Nevada, United States of America, for leave to file a specification under Part 1 of the Mysore Inventions and Designs Regulation, 1894.

1. The applicant is in possession of an invention for Improvements in Filters for Metallurgical and Other Uses; it is the assignee of the inventor, Clarence G Patterson, a citizen of the United States and a resident of Berkeley, California, United States of America, Engineer, the Inventor; and, to the best of its information and belief, the invention is new within the meaning of Part 1 of the Mysore Inventions and Designs Regulation, 1894, and no circumstance exists which, if the applicant is authorized to file a specification, and files it in accordance with that Part, will disentitle it to an Exclusive Privilege thereunder in respect of the invention.

2. The following is a description of the invention in respect of which application has been made for a patent in the United Kingdom No. 28625 of 1909 dated December 7th, 1909, See Journal No. 1091, page 2032,

by Philip Middleton Justice, as a communication from Harold Binney, Attorney for The Butters Patent Vacuum Filter Company, Incorporated:-

P.S.P.

The corresponding application for a Patent in British India is No 213 of 1910

The improved filter was primarily designed for use in the cyanide process for treating ores and is particularly desirable for filtering slimy ores or slime of a nature that tends to clog the filter after a layer of considerable thickness has been formed upon the filtering surface. It has long been the practice to separate the value-bearing solution from the pulp by means of filters and after impoverishing the precipitate by washing it with weaker solution or clear water to remove and discard the filtrate on the dump heap and to treat the value-bearing solution for the recovery of the values contained in them.

The present improvement is practicularly adapted for such practice and provides quick and

ready access for the purpose of cleaning both sides of the filtering cloth or medium, or for repairs. It also provides for the ready discharge of the layer of precipitate when the same has accumulated to such a thickness as to make further filtration undesirable before the filter is freed from it. It allows the layer of precipitate to be discharged by a reverse current of air, if desired, instead of water, through the filtering medium, and it provides for the interchange, repair or renewal of relatively small portions of a filter leaf without disturbing the other portions. Other valuable features of the invention will be readily appreciated from the following description.

In the drawings I have illustrated the improved filter in the best form at present known to me, but I of course wish to be protected in the various features of the improvement. It will be understood that many features can be used separately or in combination with others and can be present in widely differing forms from those which I illustrate.

Fig. 1 is a face view of a filter leaf broken off at one end, as its length is immaterial.

Fig. 2 is an end view of three such filter leaves placed together in proper working relation.

Fig. 3 is a cross-section of Fig. 1 on the section plane 3-3.

Fig. 4 is a detail view in section through the filter bag to show the details of construction

of one of the units or members of the composite filter leaf of Fig. 1.

Fig. 5 is a central longitudinal section of the same.

Fig. 6 is a detail cross-section of the upper member of a modification of the filter leaf frame.

Fig. 7 is a reduced size illustration of a modification of the educting connections of the filter members or units.

Fig. 8 is a view of a modification of the coupling connections of the filter units or members.

Under my preferred construction a large number of filter leaves such as are illustrated in Fig. 1 may be placed side by side close together, as in Fig. 2, and suspended in a suitable filter tank by the projecting ends of the horizontal top member of each. Each full size working leaf or frame may contain twenty separate filter bags or filter units, all of which can be separately and quickly detached from the frame and from each other for repairs or very thorough cleaning when desired. The frame illustrated in Figs. 1, 2 and 3 comprises two panels formed by three vertical uprights or members 10, five inches wide by one inch thick, a horizontal bottom member 11 preferably about an inch and a half thick and set on edge, as illustrated, and provided with strips of non-

corrosive metal secured on either side as at 12 to form a groove for receiving and aligning the lower ends of the filter bags or units; a stout horizontal header 13 secured to the upper ends of the uprights 10, as shown, and projecting at each end as at 14 in order that the filter frame may be hung thereby upon the side walls of the tank, of appropriate size; a horizontal header or pipe 15 extending lengthwise beneath the wooden header member 13 and provided with one or more outlets or main connections 16 for connection preferably with a partial vacuum so as to apply suction to the interior of the filter members and with as many depending suction tubes 17 as there are separate filter bags or units; and guide bars 18, 19, of suitable non-corrosive metal secured in position to hold the filter bags or units in alignment in the frame at their upper ends. The guide bars 18 on one side of the frames are hinged as at 20 to swing outwards and upwards clear of the bags, so the bags may be conveniently taken out; and clamping hooks 21 preferably pivoted to the fixed guide bars 19 provided at suitable intervals to hold the guide bars 18 in their closed position, or to release them at will.

The filter leaf may be divided into several panels by intermediate uprights 10. When several of the filter frames have been hung in the tank the edges of the uprights 10 come together, as shown in Fig. 2, and hold the opposed filtering surface separated by an interval of a few inches, sufficient to allow the filter cakes of precipitate

to be formed on the respective faces of each frame or leaf without interference from the adjacent leaf.

The individual filter units 30, ten of which constitute a single panel of the leaf shown in Fig. 1, consist primarily of a bag of canvas or other suitable filtering material tightly stretched upon an inner form of wood having preferably the following construction. The width of each center is sufficient, allowing for the thickness of the canvas, to make one-tenth of the panel of the filter leaf. At its lower end it is rabbeted to form a tongue 32 which, with the canvas bag, is received in and registers with the groove formed between the metal strips 12 of the filter frame. The front and rear faces of the form or center are grooved vertically to form vertical channels, as at 33, for the filtrate, and are provided with horizontal cross-channels 34 which lie partly below the level of the guide bars 18, 19 and partly underlie those guide bars. Depending pipe connections 17 extend down somewhat lower than the top of these forms or centers loosely fitting a recess at the top of the same, as seen in Figs. 4 and 5. Each of the wooden forms is divided by slightly oblique longitudinal cuts 35 into a central wedge-shaped member 36 and two lateral members which fit such wedge. The wedge member is preferably provided with a bolt 37 secured by a nut 38 and the head of which, 39, projects slightly into the recess at the upper end of the form, so that it can be made use of for taking hold of the wedge piece

by suitable means and drawing it out forcibly from between the two side pieces of the form when it is desired to remove the form from the interior of the bags, the fabric of which is shown at 31 in cross section in Figs. 4 and 5. The bags tightly fit the forms and at their upper end when in place in a filter frame they are drawn tightly around the respective pipes 17 and wrapped tightly thereto by means of strong cords 40 which are then tied.

It will be understood that the filter bags and their entained wooden forms are separately and severally removable from the filter leaf. This is done by unwrapping the cord 40, opening the mouth of the bag so as to enable it to clear the lower end of the pipe 17, then swinging the bar 18 up out of the way and bringing the upper end of the filter bag and its wooden form forwards so as to clear the pipe 17 and the bar 18, after which the filter bag may be raised, drawing the tongue 32 clear of the lower member of the filter frame. The wedge 36 may be then drawn out of the bag, applying force by means of the head 39 if necessary, and then the side members of the form may be drawn out and the bag thoroughly cleaned or repaired or a new bag substituted. In assembling, the side members of the form are first put in the bag and then the middle or wedge piece 36 is

thrust into place, expanding the side pieces and the bag and making preferably a very tight fit of the bag upon the enclosed form. Preferably the cord 40 is run through a hem at the upper end of the bag, as a drawing string. When, therefore, the lower end of the form has been put in place between the strips 12 and the upper end brought into alignment with the pipe 17, the string 40 is drawn tight and wrapped around the neck of the bag so as to close the bag around the pipe 17, as shown in Figs. 4 and 5. When all the members of the panel are in place, the bar 18 is returned to its normal position and clamped by the clamp hooks, 21 as seen in Fig. 5.

When such a filter leaf is put in the tank, the bath should preferably rise to a point slightly above the wrapping 40. In the first use of the bag after it has been first put in place or has been thoroughly cleaned inside andout, the slimes depositing on its exterior when the suction is applied to its interior through the pipe 17, substantially and eventually completely encases and seals the portions of the bag above the bars 18 and 19 because this portion of the slimes upon the bag may remain intact and undisturbed while the filter is used very many times, being cleansed by merely discharging the deposit from the lower portion of the filter with the aid of a reverse current of air or water preferably introduced under pressure inside of the bag. During suction and

while the filter is immersed in the bath the filtrate passing through the canvas and along the grooves 33 through the cross-grooves 34 finds its way to the educting pipe 17 and the suction is communicated with substantial uniformity to the whole active surface of the filter. When a deposit of the maximum permissible or desired thickness has been formed on the two faces of the filter leaf and preferably impoverished and washed, the entire deposit or cake covering the face of the panel, one on each side below the bars 18 and 19, may be loosened and dropped off in its entirety by introducing pressure into the interior of the filter. A cross-groove 34 lying directly under the comparatively sharp edge of the bar 18 and 19 insures the cracking and rupture of the cake of deposit sharply and substantially evenly along the lower edge of the bar while the almost simultaneous transmission of the pressure throughout the longitudinal grooves 33 loosens the cake in its entirety. Preferably the rabbeting which forms the tongue at 32 is carried somewhat higher than the upper edge of the bars 12 so as to form a cross-groove which will act similarly to the groove 34 and facilitate the clean release of the lower edge of the cake at the bars or strips 12. After the discharge of the cake the filter may be used again any number of times without disturbing the deposit which is formed upon and virtually seals the upper portion of the bag over the bars 18 and 19, thus obviating the need of rendering these portions of the filter impervious.

The ten filter bags or filter units that form a single panel lie closely together, as seen in Fi . 1, and their faces lying all in the same place constitute in effect a single strong and very even filtering surface throughout which the filtering suction is very evenly applied.

In the modification shown in Fig. 6 a rectangular tubular metallic header member 131 is shown which may be substituted for the combined wooden header 13 and suction tube 15. The tubes 17 for connecting with the respective filter bags may be directly tapped into the bottom of this and the main suction connection 16 may be tapped into it at the top. The ends of course will be closed, as must of course also be the ends of the header pipe 15.

For use where for any reason engineers prefer to have the filtrate drawn from the bottom of the filter instead of the top, the educting tube is extended all the way down through the middle or wedge member 36 to form, as seen at 171 (Fig. 7) an opening into the rabbeted portion at the bottom of the form. In this case it is necessary to have a union connection 172 between the pipe 171 and the pipe 17, or some flexible and tight connection so as to allow the removal of the filter unit and so also to insure the suction being applied first at the bottom of the form and not at the top.

In Fig. 8 a furthermodification is shown in which a short pipe connection 174 provided with a shoulder that is secured or screwed to the top of

the wooden form is employed and the union connection 172 used both to make fluid connection with the pipe 17 and as means of holding the form in place. Under such conditions and also when as described in connection with Fig. 7, the bars 18 and 19 might be omitted and an impervious section with a sharp defining edge be formed upon the head of the bag by coating it with P and B paint or other impervious paint, along the lineof the upper edge of the groove 34 as at 175.

It will be seen that the construction described provides for the carrying and correct aligning of the filter members in the filter frame, the proper aligning and spacing of the filter frames or leaves in respect to each other, and ready means for taking to pieces or assembling the filter leaves which, together with the frames of the filter, amy be readily taken to pieces and packed on mule-back or in any other conveniently small and light packages for transportation when desirable. To facilitate this the joints between the uprights 10 andthe horizontals 11 and 13 are preferably secured by non-corrosive screws or in other convenient detachable manner.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:

1. In a filter, a tubular septum, having an interior expansible and collapsible form.

2. A filter or filter unit, comprising a septum, and a form for carrying it embodying means for stretching it while upon the form.

3. A filter leaf comprising one or more panels each comprising a plurality of filtering units detachably held together.

4. A filter having a composite panel combining a plurality of units having a plurality of filtering septa for receiving a united layer of precipitate.

5. A filter or filter unit, having a filter bag, an interior support therefor, supports external to the bag for both holding the interior support in place and definitely limiting the cake formation upon it, and fluid connections for the interior of the bag.

6. A filter or filter unit comprising a septum, a carrying form and a pipe loose from said form and secured to said septum in combination with mechanical external supports for said unit acting against the septum and form and means for mounting the said supports and the said pipe holding said form and septum in fixed relation to said pipe.

7. A filter leaf comprising a frame and a plurality of filtering units composing a panel and having means for securing the units in the panels comprising at least one grooved member for receiving and holding a portion of each unit and at least one movable guide bar.

The Applicant, therefore, applies for leave to file a Specification of the Invention pursuant to Part 1 of the Mysore Inventions and Designs Regulation, 1894.

The Butters Patent Vacuum Filter Company Incorporated

By Edwin Hatfield Lathwaite
Vice President.

I, the applicant above-named, do declare that what is stated in the above application is true to my knowledge, except as to matters stated on information and belief, and as to those matters, I believe them to be true.

Dated this third day of December 1909.

The Butters Patent Vacuum Filter Company Incorporated

By Edwin Hatfield Lathwaite
Vice President.

Fig. 1

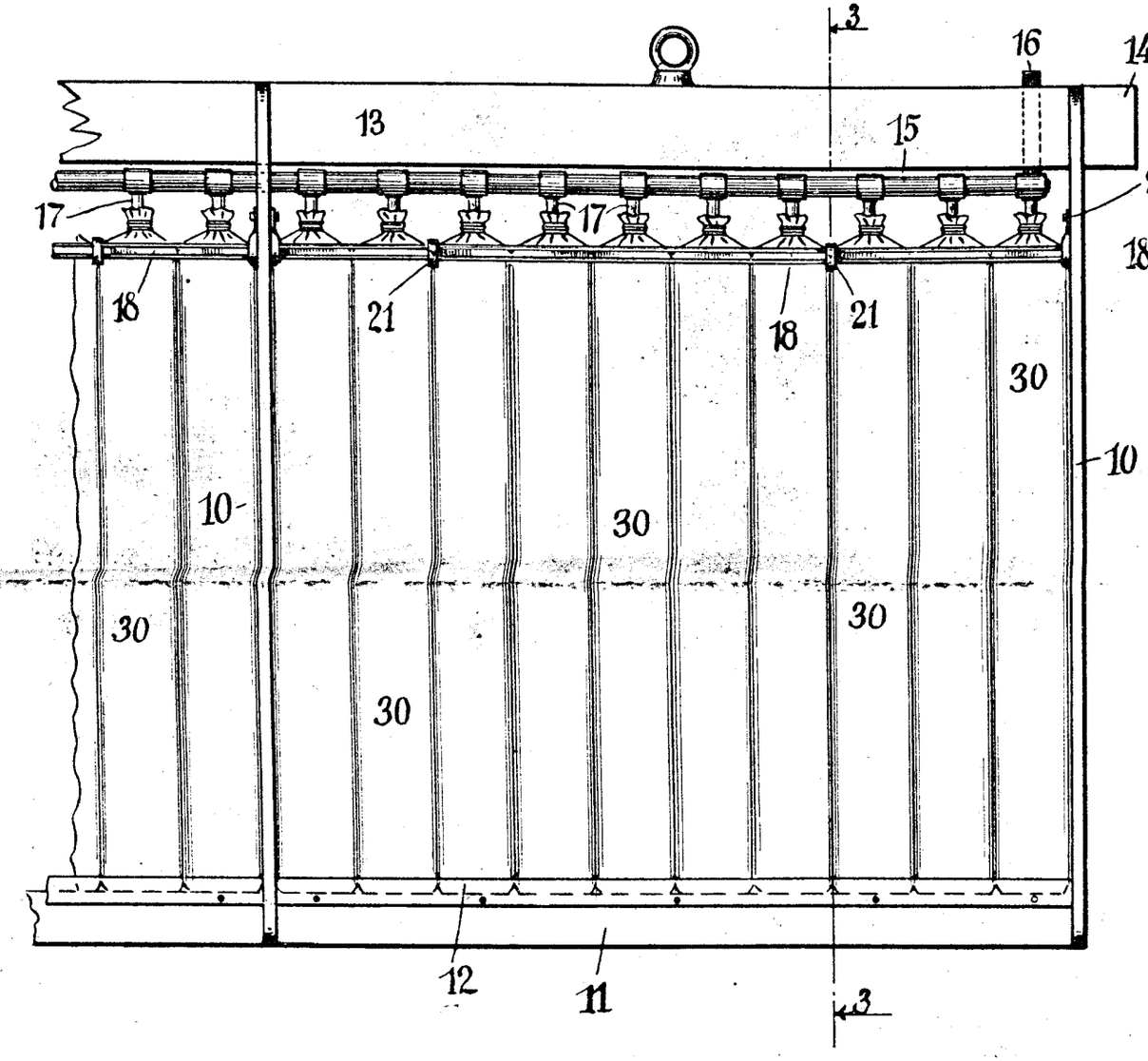


Fig. 2

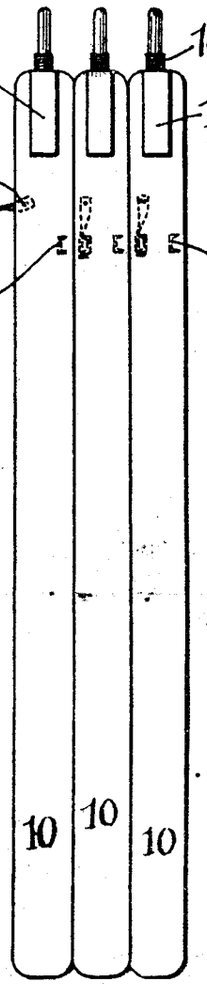
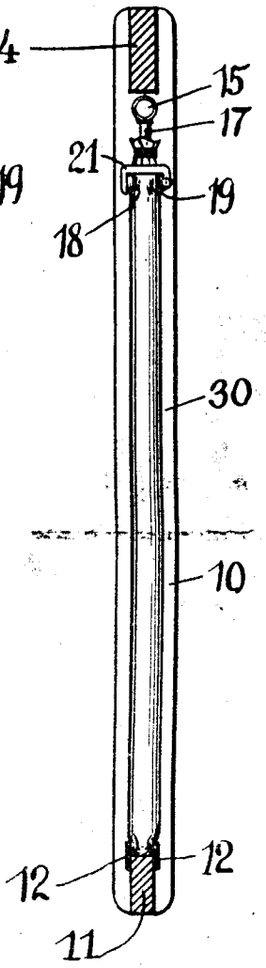


Fig. 3



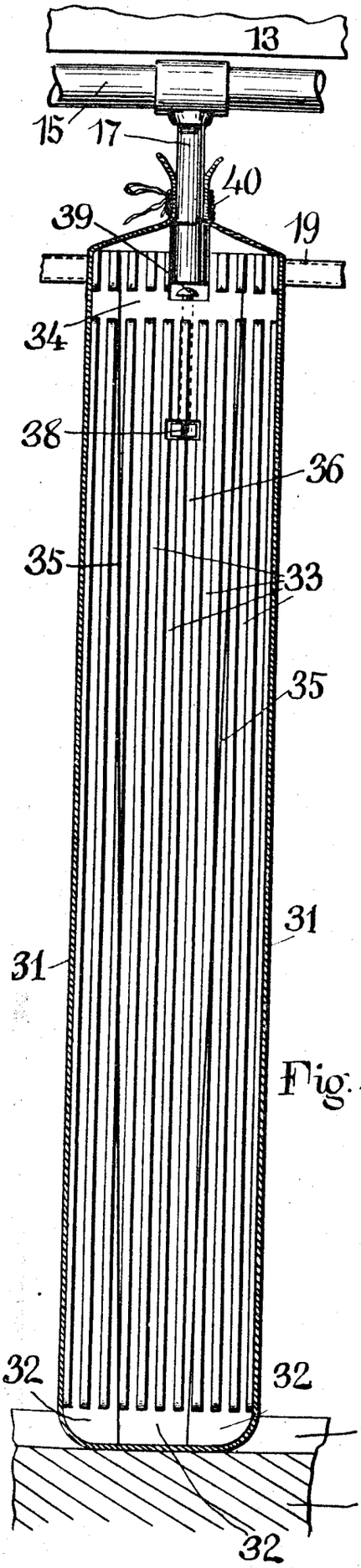


Fig. 4

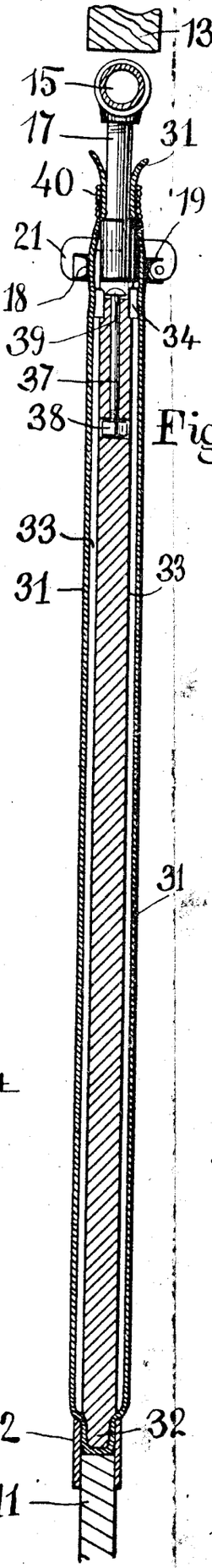


Fig. 5

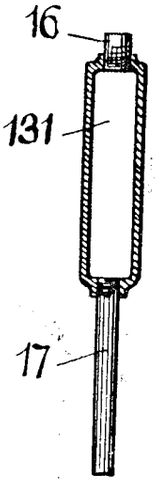


Fig. 6

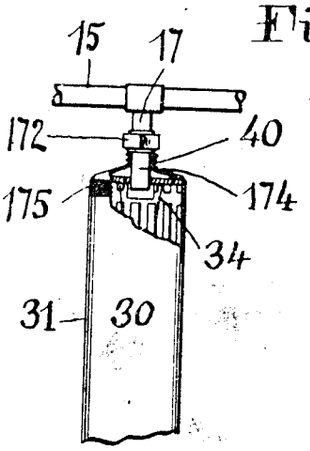


Fig. 8

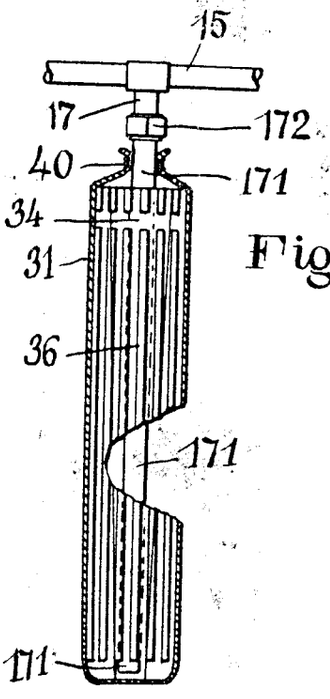


Fig. 7

G.R.S. 26]

File No. 280-07
Serial No. 6

Diary No. of letter replied to _____

No 6212

General and Revenue Secretariat
( )
, *the* 190

To
Messrs McPenning McPenning
Patent Agents
19 Watkins Lane
Howrah.

Date of issue 4.9.10

Signed by Mr DS Rama Iyer

Sir,

With reference to your letter dated the 7th may 10, forwarding an application from The Butters Vacuum Filter Company, Incorporated, ~~a~~ Manufacturers, a Corporation of the State of Nevada U.S.A. for leave to file a specification of an invention for "Improvements in Filters for metallurgical and other uses", I

over.

SUBJECT.

am directed to enquire whether application to file a specification of the same invention said to have been made in the Govt of India and of the United Kingdom have been granted and if so, to request that an authenticated copy of the order of Govt of India etc, granting the application, may be furnished to this Office at an early date.

I have &c

3.7.10

for Secy

217

List of enclosures

Copied by

Examined by

GPB—10,000—20-4-05.

V 8/8 CV

Calcutta 5th August 1910.

No 192.

Gm 280-09 D. 648 30

CC7

To

The Secretary to the Government of His Highness
The Maharaja of Mysore,
General & Revenue Departments.

Sir

re. Application of the Butters Patent
Taenium Filter Company

We have the honour to acknowledge receipt of your letter No. G. 212/GM280-09P, dated 11th July 1910, and in reply have the honour to state that the corresponding Applications in the United Kingdom and India have been granted.

As requested we enclose duplicate of the order passed on the corresponding Indian Application.

We have the honour to be
Sir
Your most obedient servants
DePenning & DePenning
Patent Agents.

DEPENNING & DEPENNING
PATENT AGENTS
CALCUTTA.

GOVERNMENT OF INDIA.

Department of Commerce and Industry.

Register No. 213 of 1910.

Calcutta, the 9 *1910.*

WHEREAS an application, numbered as above and received on the 20th April 1910, has been submitted under section 5 of the Inventions and Designs Act, 1888, by The Butters Patent Vacuum Filter Company, Incorporated, manufacturers, a corporation of the State of Nevada, United States of America, having offices and doing business at Virginia city, Nevada, United States of America,

(hereinafter referred to as "the applicant") for leave to file a specification of an invention for improvements in filters for metallurgical and other uses;

And whereas the applicant has duly complied with all the requirements of section 5 of the said Act;

The Governor-General in Council is pleased, under section 6 of the said Act, to authorise the applicant to file a specification of the said invention in accordance with the provisions of the said Act.

ORDERED, that the applicant be, and he is hereby, informed accordingly.

By order of the Governor-General in Council,

Offg. Assistant Secretary to the Government of India.

Dated the _____ *191* .

Certified that the fees prescribed in the fourth schedule to the Inventions and Designs Act, 1888, in respect of the application for leave to file the said specification and of the filing thereof have been paid by the applicant, and that the specification hereinbefore described has been duly filed in accordance with the provisions of section 8* of the said Act on this the _____ day of _____ 191 .

Assistant Secretary to the Government of India.

Dept. of C. & I. Patents Regr. No. 24.

* See reverse.

Section 8 of the Inventions and Designs Act, 1888.

8. (*1*) If within six months from the date of an order under section 6, sub-section (*1*), or within such further time, not exceeding three months, as the Governor-General in Council, in his discretion, may, [on cause shown to his satisfaction and on payment of the fee prescribed in that behalf in the fourth schedule, see fit to allow, the applicant causes a specification of his invention to be filed in manner by this Part required, and the fee prescribed in the fourth schedule in respect of the filing of the specification to be paid, the applicant shall, subject to the other provisions of this Part, be entitled to the exclusive privilege of making, selling and using the invention in British India, and of authorising others so to do, for a term of fourteen years from the date of the filing of the specification.

(*2*) But an exclusive privilege in respect of an invention of a new manufacture shall, notwithstanding anything in sub-section (*1*), cease if the inventor fails to pay, within the time limited in that behalf by the fourth schedule, any fee prescribed in that schedule in respect of the continuance of the privilege.

(*3*) If, nevertheless, in any case, by accident, mistake or inadvertence, an inventor fails to pay any such fee within the time so limited, he may apply to the Governor-General in Council for an enlargement of the time for making the payment.

(*4*) Thereupon the Governor-General in Council may enlarge the time accordingly, on payment of the fee prescribed in that behalf in the fourth schedule and subject to the following conditions, namely,—

(*a*) the time for making a payment shall not in any case be enlarged for more than three months; and

(*b*) if any suit is instituted in respect of an infringement of the exclusive privilege committed after a failure to make a payment within the time limited for the making thereof and before the enlargement of that time, the Court disposing of the suit may, if it thinks fit, refuse to award or give any damages in respect of the infringement.

S. G. P. I.—No. 1281 C. & I.—9-3-1910—500—G. C.

No. G. 996
G. M. 280-09-8

GOVERNMENT OF MYSORE

General Department.

Register No. 21 of 1909-10.

Bangalore, the 16-8- 1910.

WHEREAS an application, dated the 7th May 1910 and received on the 12th ideem August 1910, has been submitted under Section 5 of the Mysore Inventions and Designs Regulation, 1894, by The Butters Patent-Vacuum Filter Company, Incorporated, Manufacturers, a Corporation of the State of Nevada, United States of America, having offices and doing business at Virginia City, Nevada, United States of America, (hereinafter referred to as "the applicant") for leave to file a specification of an invention for "Improvements in Filters for Metallurgical and other uses"

And whereas the applicant has duly complied with all the requirements of Section 5 of the said Regulation;

The Government of Mysore are pleased, under Section 6 of the said Regulation, to authorize the applicant to file a specification of the said invention in accordance with the provisions of the said Regulation.

ORDERED, that the applicant be, and he is hereby, informed accordingly.

By Order of the Government of Mysore,

10/8/10

for *Secretary to the Govt. of Mysore,*
Gen. and Rev. Depts.

Draft)

Certified that the fees prescribed in the fourth schedule to the Mysore Inventions and Designs Regulation, 1894, in respect of the application for leave to file the said specification and of the filing thereof have been paid by the applicant, and that the specification hereinbefore described has been duly filed in accordance with the provisions of Section 8 of the said Regulation on this the Thirtieth day of August 1910.

Draft)

2/9/10

Secretary to the Govt. of Mysore,
Gen. and Rev. Depts.

(Section 8 of the Inventions and Designs Regulation, 1894.)

8. (1) If within six months from the date of an order under Section 6, Sub-Section (1), or within such further time, not exceeding three months, as the Government of Mysore, in its discretion, may, on cause shown to its satisfaction and on payment of the fee prescribed in that behalf in the fourth schedule, see fit to allow, the applicant causes a specification of his invention to be filed in manner by this Part required, and the fee prescribed in the fourth schedule in respect of the filing of the specification to be paid, the applicant shall, subject to the other provisions of this Part, be entitled to the exclusive privilege of making, selling and using the invention in the Territories of Mysore, and of authorizing others so to do, for a term of fourteen years from the date of the filing of the specification.

(2) But an exclusive privilege in respect of an invention of a new manufacture shall, notwithstanding anything in Sub-Section (1), cease, if the inventor fails to pay, within the time limited in that behalf by the fourth schedule, any fee prescribed in that schedule in respect of the continuance of the privilege.

(3) If, nevertheless, in any case, by accident, mistake, or inadvertence, an inventor fails to pay any such fee within the time so limited, he may apply to the Government of Mysore for an enlargement of the time for making the payment.

(4) Thereupon the Government of Mysore may enlarge the time accordingly, on payment of the fee prescribed in that behalf in the fourth schedule, and subject to the following conditions, namely :—

(*a*) the time for making a payment shall not in any case be enlarged for more than three months ; and

(*b*) if any suit is instituted in respect of an infringement of the exclusive privilege committed after a failure to make a payment within the time limited for the making thereof and before the enlargement of that time, the Court disposing of the suit may, if it thinks fit, refuse to award or give any damages in respect of the infringement.

GPB—500—7-4-09.

G.R.S. 26]

G. M. File No. 280 09-10
Serial No. 9.

Diary No. of letter replied to _____

No. G. 997
Exam 1.

General and Revenue Secretariat
(.)
, *the* 190

To
Messrs De Penning & De Penning,
Patent Agents
19, Watkins Lane, Howrah
Calcutta

Date of issue 16. 8. 10.

Signed by Sd/ B. Ramaswamaiya

Gentlemen,

With reference to the correspondence ending with your letter No. 192 of the 5th instant ~~forwarding~~ + ~~herewith~~ in connection with the application of the Butters Patent Vacuum Filter Company of the State of Nevada, U.S.A., in respect of an invention for "Improvements in Filters for Metallurgical & other uses", I am directed to forward

P.T.O. over.

SUBJECT.

herewith for transmission to the applicants the Govt. order granting leave to file a specification of the invention.

Thanks,
12/10/10

List of enclosures,

Copied by

Examined by

GPR—10,000—23.5.08

Calcutta. 27th August 1910.

30. 8. 10
No 205

D 1000

Gm. 7280-09-10

To
The Secretary
Government of Mysore
General & Revenue Departments

Sir

We have the honour to forward herewith under Order dated 16th August 1910, Patent Register No. 21 of 1909-1910. the Specification of The Butters Patent Vacuum Filter Company, Incorporated Manufacturers, a corporation of the state of Nevada, U.S.A. having offices & doing business at Virginia City, Nevada U.S.A. of an Invention for "Improvements in filters for metallurgical & other uses"

We also forward by Money Order the fee thereon of Rs 30/-/- and shall feel obliged by the certificate being sent us in due course

The order in this case is herewith returned.

We have the honour to be
Sir
Your most obedient Servants
DePenning & DePenning
Patent Agents

DePENNING & DePENNING
PATENT AGENTS
CALCUTTA.

30

Dr Penning & Dr Ruiz

fee on the Spec

of The Butters Patent

Vacuum Filter Co

Incorporated

please see our letter

of 27.8.10

Received Rupees thirty only

30/8/1910.

To

Br. V

30/8/1910.

No. E. 1580
E. Rs. 280-09-11

MYSORE GOVT. GEN. & REV. SECRETARIAT,
Dated Bangalore,..... 8 ..... 9 .....1910.

NOTIFICATION.

(PATENT.)

The following specification of an invention has been filed in accordance with Sections 8, 9, 10 and 11 of Regulation XI of 1894 (The Inventions and Designs Regulations) and is open to inspection at the Mysore Government Secretariat on application to the Secretary to the Government of His Highness the Maharaja of Mysore, General and Revenue Departments, and on payment of a fee of one Rupee.

By The Buttors Patent Vacuum Filter Company, Incorporated Manufacturers a corporatim of the state of Nevada, United states of America having offices and doing business at Virginia city, Nevada, United states of America

"Improvements in Filters for Metallurgical and other uses."

By Order,

Dbh) 2/9/10
for Secretary.

To

The Compiler, *Mysore Gazette*, for publication

V5

G.N. 2/9

No. C. 1583
C.R.-280-09-12
C.R.-280-09-Gen-2

MYSORE GOVT. GEN. & REV. SECRETARIAT,

Dated Bangalore, 8 Sept. 1910.

From

The Secretary to the Government of H. H. the Maharaja of Mysore,
General and Revenue Departments.

To

Messrs De Penning & De Penning,
Patent Agents,
19, Watkin's Lane, Howrah Calcutta

~~Sir,~~ Gentlemen

With reference to your letter dated the 27th August 1910, I am directed to forward copy of a Notification No. C. 1580/C.R.-280-09-11 dated 8-9-10. issued by this Government in regard to the invention filed by you under Regulation XI of 1894 (The Inventions and Designs Regulations.) for communication to the parties concerned.

The order granting permission to file specification is herewith returned, with the certificate at foot, duly filled in and signed.

I have the honor to be,
~~Sir,~~ Gentlemen
Your most obedient servant,

8/9/10
for Secretary.

G.R.S. 29A]

190 .

From

The Secy. to the Govt. of His Highness
the Maharaja of Mysore,
Genl. and Rev. Dept.

To

The Officer in charge of the
State Huzur Treasury.

Dated

Despatched 8th 9. 10.

Received

General No. G. 1582

G. Tr. No. 280-9-10

Enclosure No. Rs 30

Has the honor to remit herewith Rs 30 (Thirty only) being the fee paid by the Butters Patent Vacuum Filter Company, Virginia, Nevada, U.S.A., for filing a specification of their invention for "Improvements in Filters for Metallurgical and other uses" and to request the favor of an acknowledgment.

By order,

4/9/10

for Secretary.

MGCPL—20,000—16-2-05.

From

The Secy. to the Govt. of His Highness
the Maharaja of Mysore,
Genl. and Rev. Dept.

To
(1) The Supdt, Govt Museum -
(2) " Chief Engineer.
(3) " State Geologist.

Dated

Despatched 8 9-10,

Received

General No. G. 1583-5

Gen No. 280-09-16

Enclosure No. one

Has the honor to forward herewith for being filed a copy of the specification filed by the Butters Patent Vacuum Filter Company, Virginia, Nevada, U.S.A, of their invention for "Improvements in Filters for Metallurgical and other uses", and to request the favor of an acknowledgment.

By Order,

9/9/10
for Secretary.

VS

MGCPL—20,000—16-2-05.

G.R.S. 13]

Routine Notes.

[To be used only for notes, requisitions, etc., not intended for permanent record.]

No. 64 V 9/5 Sec. / GA to CS D 1178 Gm 280-09-15.

Rs 30/-

Received From the Secretary to the Government of His Highness the Maharaja of Mysore General and Revenue Departments.

the sum of Rupees Thirty only and credited this day Vide his docket No. G. 1582/G. M. 280-09-13 dated 8th September 1910.

H. H. The Maharaja's State Huzur Treasury,
Bangalore, 8th September 1910.

~~By Order,~~

Exd.

Hd. Acctt. ~~Baksm.~~ Treasurer

Treasury Officer, State Huzur Treasury.

N. B.—Should routine notes be written on small slips, the notes must be copied, or slips pasted on this form.

GPB—85,000—21-4-09

812/3

1910—11.

From

G. H. KRUMBIEGEL, Esq., F.R.H.S.,
Economic Botanist,
Supt., Mysore Govt. Museum,
Bangalore.

Rec 280—07—10.

To C. S. Balasundaram Iyer Esq. B.A.
Offg. Secretary to the Govt. of
H. H. the Maharaja of Mysore,
General & Revenue Department,
Bangalore.

Dated 7th September 1910.

Despatched 13th.

Received

General No. 82
No.

Enclosure No. .

I Acknowledging the receipt
of a Copy of the Specification
of an invention for "Improvements
in Filters for Metallurgical
and other Uses" filed by the
Butters Patent Vacuum Filter
Company, Virginia, Nevada, U.S.A.

: o :

No. 82

OFFICE OF THE ECONOMIC BOTANIST,
SUPERINTENDENT, MYSORE GOVERNMENT MUSEUM,

Bangalore, dated...9th/13 September 28 1910.

FROM

G. H. KRUMBIEGEL, ESQ., F.R.H.S.,
Economic Botanist,
Superintendent, Mysore Govt. Museum,
Bangalore.

To C. S. Balasundaram Ayer Esqr. B. A.,
Offg. Secy. to the Govt., of H. H. the Maharaja
of Mysore, General & Revenue Departments,
Bangalore.

Sir,

I have the honor to acknowledge the receipt of a copy of the Specification of an invention for "Improvements in Filters for Metallurgical and other uses" filed by the Buttero Patent Vacuum Filter Company, Virginia, Nevada, U.S.A. kindly forwarded with your No. G. 1583-5/G.M. 280-09-14 dated the 8th instant.

I have the honor to be,
Sir,
Your most obedient Servant,

Economic Botanist,
Supt., Mysore Govt., Museum.

M.G.D. 13]

MYSORE GEOLOGICAL DEPARTMENT,

fm 280-09-17

Dated Bangalore, 14 September *191* 0.

No. 593

From

DR. W. F. SMEETH, M.A., D.SC., &c.,

State Geologist in Mysore.

To

C.S. Balasundaram Iyer, Esquire, B.A.,

Offg. Secretary to the Government of His Highness the Maharaja of Mysore, Gen. & Rev. Depts

SIR,

I have the honour to acknowledge the receipt of a copy of the specification forwarded with your letter No. G.1583-5/G.M.280-09-14, dated 8th September 1910, in respect of an invention for "Improvements in filters for Metallurgical and other uses" and filed by the Butters Patent Vacuum Filter Company, Virginia, Nevada, U.S.A.

I have the honour to be,

Sir,

Your most obedient servant,

K. Smeeth

for State Geologist in Mysore.

C.N.

GBP--250—14-5-10

No. 7924

MYSORE P. W. DEPARTMENT,
CENTRAL OFFICE.
Bangalore,..13th..September.1910.

From

M. VISVESVARAYA, Esq., M.I.C.E.,
Chief Engineer of Mysore,
Bangalore.

To

C.S.Balasundaram Iyer,Esq., B.A.,
Offg. Secretary to the Government of
His Highness the Maharaja of Mysore,
General and Revenue Departments, Bangalore.

SIR,

I have the honour to acknowledge the receipt of a copy of the specification filed by the Butters Patent Vacuum Filter Company, Virginia, Nevada, U.S.A., of their invention for - - "Improvements in Filters for metallurgical and other uses", - - forwarded with your No. G.1583-5/G.M.280-09-14 dated the 8th - instant.

I have the honour to be,
Sir,
Your most obedient servant,

Deputy Chief Engineer,
Mysore P.W.Department.

S.S.

D 1314

5.

19 .

MYSORE. P. W. DEPARTMENT.

No. 7924

From.

THE CHIEF ENGINEER OF MYSORE,
Bangalore.

gm 280 -09-18.

To

Dated Bangalore,

Despatched

Enclosure No

SUBJECT.

Acknowledging receipt of two copies of the specification re: "Improvements in filters for metallurgical and other uses"

10. From Messrs. De Penning & De Penning.
Patent Agents
No. 205 dated 27th Aug. 1910.
Forwards the Govt. standing license to file the specification & 1 & together with Rs 30/- and requests that the specification may be filed and a certificate granted therefor

11. To the Controller, Mysore Gazette.
notifies the filing of the above specification of 1580 dated 8.9.10.

12. To Messrs. De Penning & De Penning
No. 81581 dated 8.9.10.
Forwards copy of the above notification and returns sl. 8. certified as true & signed

13. The officer in charge of S. H. Dy
No. G. 1582 dated 8. 9. 10.
Remits Rs 30/- noted with sl. 10.

14. To Superintendent Museum.
The Chief Engineer &
The State Geologist.
Requesting acknt. for a copy of the specification sent.

15. From the officer in charge of S. H. Dy
No. 64 dated 8th Sep. 1910.
Acknowledges receipt of Rs 30/- sent with sl. 13.

16. From the Superintendent Museum
No 82 dated 9th Sep. 1910
Acknowledges receipt of the specification sent

17. From the Chief Engineer of Mysore
No. 7924 dated 13th Sep. 1910.
same as in 16.

18. From the State Geologist
No. 593 dated 14th Sep. 1910
same as in 16.